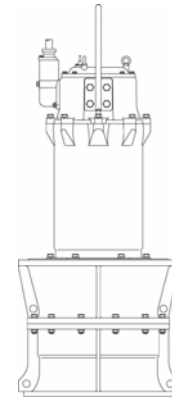




# PRODUCT BULLETIN

## MODEL SAF SUBMERSIBLE AXIAL FLOW

The SAF heavy duty submersible propeller product has been designed to give you what you want, a durable, high flow, submersible pump, all designed to give you long life. The pump features a high efficiency motor, an epoxy resin sealed cable base, an overload “Auto-Cut” motor protector and oil lubricated double mechanical seals.



### Material Specifications

| PART                | CAST IRON<br>FITTED                 |
|---------------------|-------------------------------------|
| Casing              | Cast Iron                           |
| Propeller           | Bronze                              |
| Shaft               | Stainless Steel                     |
| Motor Housing       | Cast Iron                           |
| Bolts, Studs & Nuts | Satinless Steel                     |
| Mechanical Seal     | Carbon/Ceramic<br>Carbon/Si-Carbide |

### MODEL SAF SPECIFICATIONS

**Casing:** The casing is constructed of high tensile cast iron. It is of the diffuser type, carefully and accurately proportioned to permit smooth flow and to convert high velocity energy of the fluid as it leaves the impeller into pressure.

**Propeller:** The propeller is casted in one piece of bronze material. to increased life. Enclosed impellers feature large solids passing design and high efficiency. All impellers are dynamically balanced prior to assembly.

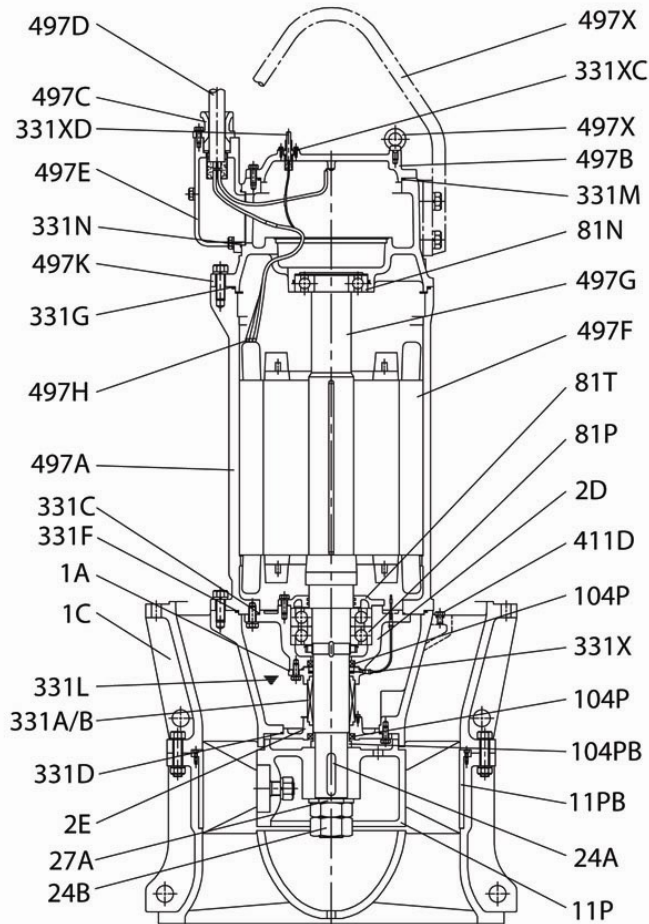
**Shaft:** The shaft is of high strength 420 stainless steel, ground to accurate dimensions and polished to a smooth surface. It is designed for extra stiffness to avoid all critical speeds in operation.

**Rear Cover:** The rear cover is constructed of cast iron or other specified material. The rear cover houses the double mechanical seal which has a Carbon/Cermanic motor side and Carbon/Silicon-Carbide pump side face arrangement. Both mechanical seals are of the oil lubricated type to provide excellent lubricating fluid for the seal faces. All seal hardware is located in the oil lubricated seal housing, eliminating potential issues with foreign matter clogging the mechanical seal springs. An oil seal is located just outside of the seal chamber housing,

adding a third seal to the pump assembly, which eliminated large solid matter from contacting the outside seal face assembly.

**Motor:** The motor housing frame is constructed of high tensile cast iron and provides support for the windings, shaft and bearing housing. All American-Marsh submersible motors are air filled for ease in servicing, lower running temperatures and feature Class F insulation. Air filled motors have the advantage of being easier to service due to the fact that the large volume of oil required for operation is not present. Larger motor horsepower feature a cooling jacket on the motor housing, which lowers operating temperatures and extends motor life. These motors feature a motor overload design that protects the motor from high amperage draw, locked impeller and high temperature issues within the pumping assembly. The cable base of the motor has a compression fitting, an epoxy sealed housing, stripped back motor leads (to prevent wicking of moisture) and o-ring construction to prohibit mousture from entering the motor housing. On larger horsepower frame sizes, a moisture leakage detector is included standard for ultimate protection.

**INDUSTRIAL**  
 Process Solids, Industrial Waste  
  
**COMMERCIAL**  
 Building Waste, Residential, Storm Water  
  
**MUNICIPAL**  
 Submersible Sewage, Heavy Solids  
  
**PRODUCT BULLETIN**  
**MODEL SAF SUBMERSIBLE**  
**AXIAL FLOW**



SAF Sectional Drawing

| Item Number  | Item Description               | Num. Req. |
|--------------|--------------------------------|-----------|
| 1A           | Casing                         | 1         |
| 1C           | Casing Cover                   | 1         |
| 2D           | Mechanical Seal Bracket        | 1         |
| 2E           | Bearing Bracket                | 1         |
| <b>11P</b>   | Impeller                       | 1         |
| <b>11PB</b>  | Impeller Liner                 | 1         |
| <b>24A</b>   | Impeller Key                   | 1         |
| <b>24B</b>   | Impeller Locknut               | 1         |
| <b>27A</b>   | Impeller Lockwasher            | 1         |
| <b>81N</b>   | Outboard Bearing               | 1         |
| <b>81P</b>   | Inboard Bearing                | 1         |
| 81T          | Inboard Bearing Thrust Plate   | 1         |
| <b>104P</b>  | Oil Lip Seal Bushing           | 1         |
| <b>104PB</b> | Oil Lip Seal                   | 1         |
| <b>331A</b>  | Mechanical Seal (Motor Side)   | 1         |
| <b>331B</b>  | Mechanical Seal (Pump Side)    | 1         |
| <b>331C</b>  | Motor Housing O-Ring           | 1         |
| <b>331D</b>  | Mechanical Seal Bracket O-Ring | 1         |
| <b>331F</b>  | Casing O-Ring                  | 1         |

| Item Number | Item Description                 | Num. Req. |
|-------------|----------------------------------|-----------|
| <b>331G</b> | Upper Housing Cover O-Ring       | 1         |
| <b>331L</b> | Mechanical Seal Lubricant        | 1         |
| <b>331M</b> | Upper Housing Cover O-Ring       | 1         |
| <b>331N</b> | Motor Lead Base O-Ring           | 1         |
| <b>331X</b> | Mechanical Seal Moisture Sensor  | 1         |
| 331XC       | Mech. Seal Moisture Cable Base   | 1         |
| 331XD       | Mech. Seal Moisture Sensor Cable | 1         |
| 411D        | Oil Plug                         | 2         |
| 497A        | Motor Housing                    | 1         |
| 497B        | Upper Housing Cover              | 1         |
| 497C        | Motor Lead Base Cover            | 1         |
| 497D        | Motor Lead                       | 1         |
| 497E        | Motor Lead Base                  | 1         |
| 497F        | Stator                           | 1         |
| 497G        | Shaft (with Rotor)               | 1         |
| 497H        | Motor Overload Protection        | 1         |
| 497K        | Motor Housing Upper Cover        | 1         |
| 497X        | Stainless Steel Eyehook          | 3         |

Recommended spare parts are in BOLD.